

A b s t r a c t

Axial piston compressor, especially a compressor for the air-conditioning system of a motor vehicle, having a housing and, for drawing in and compressing a coolant, a compressor unit arranged in the housing and driven by means of a drive shaft (104), the compressor unit comprising pistons (118), which move axially back and forth in a cylinder block, and a tilt plate (swash plate or wobble plate; or tilt ring (107) which drives the pistons and rotates together with the drive shaft (104). The geometry and dimensioning of all parts moved in translation, such as axial pistons (118), piston rods or sliding blocks (121, 122) or the like, on the one hand, and all parts moved in rotation, such as the tilt plate (107), members for conjoint movement or the like, on the other hand, are such that, for any desired tilt angles (α) of the tilt plate (107), between a predetermined minimum tilt angle (α_{\min}) and a predetermined maximum tilt angle (α_{\max}), the moment $M_{k,ges}$ due to the masses moved in translation, such as pistons (118), sliding blocks (121, 122), piston rods or the like, is approximately equal to the moment M_{sw} due to the moment of deviation, that is to say the moment due to the mass inertia of the tilt plate (107).

(Fig. 10)